

spring they may be seen in large numbers at Khartoum, hawking gracefully over the bean-fields of the natives.

330. STRUTHIO CAMELUS Linn.

The Ostrich is widely distributed through the country. I have seen it on the Setit, on the Dinder, on the White Nile and Bahr-el-Ghazal, and in Kordofan.

The shooting of Ostriches for sport is now entirely prohibited in the Soudan.

XXV.—Notes on the Parrots. (Part I.)

By T. SALVADORI, H.M.B.O.U.

THIRTEEN years have elapsed since the publication of the twentieth volume of the 'Catalogue of Birds in the British Museum,' which contained the Order PSITTACI or Parrots, and not much of a definite kind has been done since as regards the classification of the group, though many new species have been described and not a few obscure forms have been made clear. I have therefore thought it not useless to prepare a sort of Appendix to my previous work, in order to bring up to date our knowledge of the group.

As regards the general classification of the Parrots, some attempts have been made since the publication of the Catalogue, but I do not think that any of them are better than mine.

Messrs. Beddard and Parsons in 1893 published a paper, "On certain Points in the Anatomy of Parrots bearing on their Classification"*. They had studied the syrinx and the myology of the group, but it appeared from their remarks that they were not prepared to produce a complete scheme of classification of the Psittaci. A point, strange to say, on which they seem to have been more decided, is that *Stringops* does not deserve the high rank of the representative of a family!

Prof. Newton (1894), in the 'Dictionary of Birds'

* Proc. Zool. Soc. Lond. 1893, pp. 507-514, pl. xli.

(pp. 684-691), seems to accept five of the families admitted in my work—*Nestoridae*, *Stringopidae*, and *Psittacidae* without doubt, and *Cacatuidae* and *Loriidae* as probably justifiable—while he says that exception may be taken to the *Cyclopsittacidae*. When we know something about the structure of the tongue of the *Cyclopsittacidae* we shall better understand the value of that group.

Dr. Mivart, in 1895, published a paper on the hyoid bone of certain Parrots*, describing its peculiarities in different species (*Psittacus erithacus*, *Lorius domicella*, *Lorius flavo-palliatus*, *Eos reticulata*, *E. indica*, *Trichoglossus ornatus*, and *Stringops habroptilus*), and shewing that the first and last species have characters which prove that they severally belong to different families, while the other species belong to a third family.

In two other papers, published in 1895, bearing on "The Skeleton of *Lorius flavo-palliatus* (taken as the type of the *Loriidae*) compared with that of *Psittacus erithacus*" (type of the family *Psittacidae*) †, Dr. Mivart has shown the many differences these species present, and has exhaustively proved the value of the family *Loriidae*.

In a subsequent paper, published by Dr. Mivart in 1896, "On the Hyoid Bones of *Nestor meridionalis* and *Nanodes discolor*" ‡, the right of the family *Nestoridae* to stand is equally demonstrated.

Dr. Forbes and Mr. Robinson in 1897 §, and Dr. Sharpe in 1900 ||, have entirely followed my arrangement of the Parrots; the same has been done by Selater in 1902 ¶; while Dr. Dubois in 1899 **, in accepting my six families, has

* Proc. Zool. Soc. Lond. 1895, pp. 162-174.

† T. c. pp. 312-337, 363-399.

‡ Op. cit. 1896, pp. 236-240.

§ Catalogue of Parrots in the Derby Museum (Bull. Liverp. Mus. i. pp. 5-22).

|| Hand-list of the Genera and Species of Birds, vol. ii.

¶ "List of the Parrots represented in the Society's Collection in January 1902, with remarks on some of the rarer species" (Proc. Zool. Soc. Lond. 1902, pp. 166-171).

** Synopsis Avium—Nouveau Manuel d'Ornithologie, fasc. i. pp. 1-34.

placed them in a different sequence, which is no improvement, I think.

Dr. Shufeldt, in 1902*, published a paper on "Osteology of the Psittaci," repeating what he had written in a previous paper about the osteology of the Carolina Paroquet, and adding some notes about the osteology of the Owl-Parrot. He gives no conclusions as regards the divisions of the Order, but only expresses the opinion that the Parrots may be the next of kin to the Owls.

Mr. Mudge, in 1902†, attempted a classification of the Parrots based on the structure of the tongue, taking into consideration the lingual myology and osteology, and came to the conclusion that he could admit only three families—*Loriidæ*, *Nestoridæ*, and *Psittacidæ*. I cannot help thinking that if Mr. Mudge had not confined himself to the study of the tongue, but had investigated other organs, he would have found sufficient characters to separate from the *Psittacidæ* the *Cacatuidæ*, the *Stringopidæ*, and even the *Cyclopsittacidæ*. One thing is certain, that the arrangement proposed by Mr. Mudge is the most unnatural grouping which can be imagined by an ornithologist. To prove this statement it will be enough to say that *Psittacula* is united with *Cyanorhamphus* and *Nymphicus*, *Pyrrhulopsis* with *Caica*, and *Loriculus* with *Pyrrhura*, while *Psephotus* is joined to *Conurus* and *Palæornis* and separated from *Platycercus*. *Ara* is separated from *Conurus*, and *Stringops* and *Nasiterua* are united with *Cacatua*, *Microglossus*, *Calopsittacus*, and *Calyptorhynchus*. Mr. Mudge seems not to have realized how much his arrangement of the *Psittacidæ* disagrees with the geographical distribution of the genera.

As regards the study of single families and groups, systematically and geographically, some good work has been done since 1891.

One family, the *Loriidæ*, has been treated monographically

* Ann. of the Carnegie Mus. i. pp. 399-421.

† "On the Myology of the Tongue of Parrots, with a Classification of the Order, based upon the Structure of the Tongue" (Trans. Zool. Soc. Lond. xvi. pp. 211-278, pls. xxvi.-xxix.).

by Mivart*, with good illustrations by Mr. Keulemans; but there is not much new in the text, Mivart not having been a specialist on the group.

Mr. W. Rothschild and Dr. Hartert have given us some excellent notes on the Papuan species of Parrots †, and Dr. Reichenow has treated the African species in a masterly way ‡.

Dr. Hartert has published a paper "On the Genus *Psittacella*" ('Ibis,' 1897, pp. 58-60, pl. iii.) and Dr. Martorelli another, "On the Variations of a Lory (*Eos fuscata*), as exhibited by specimens in the Turati Collection" ('Ibis,' 1897, pp. 61-63).

I may mention here that I have had the opportunity of specially studying the genus *Pyrrhura*, and have added to it four species, three that are new ('Ibis,' 1900, pp. 667-674, pl. xiv.) and a fourth previously insufficiently known.

Last of all, Mr. Seth Smith, in 1903, published a work with the following title: 'Parrakeets; being a Practical Hand-book to those Species kept in Captivity.' I have not had the advantage of seeing this work, but I suppose that it is of a popular nature.

I will now proceed with my additional notes in systematic order.

Fam. I. NESTORIDÆ (Cat. Birds Brit. Mus. xx. p. 4.)

NESTOR SEPTENTRIONALIS Lorenz, Verh. z.-b. Ges. Wien, 1896, p. 198 (North Isl.); Sharpe, Hand-list, ii. p. 1, sp. 3 (1900); Dubois, Syn. Av. p. 1054 (fasc. xiv. 1903).

The original description of this species runs as follows:—

N. SEPTENTRIONALIS. *Nestori meridionali* Gmelin similis, sed minor; vertice fusco (nec cano); remigibus secundariis et tectricibus alæ fuscis vix florescentibus (*sic*) (nec cyaneo-viridibus); cauda fusca, ad basin colore flavo varvata (non viridescens).

Hab. North Isl., New Zealand.

* A Monograph of the Lories, or Brush-tongued Parrots, composing the Family Loriidæ. Pp. i-lviii, 1 193, pls. lxi. Folio, London, 1895.

† Nov. Zool. viii. pp. 64-88 (1901).

‡ Die Vögel Afrikas, vol. ii. pp. 1-25.

I have never seen an example of *N. septentrionalis*, but Dr. Hartert informs me that in the Tring Museum there are four specimens from the North Island sufficiently distinct from the South-Island bird. Still it appears that it is not always easy to perceive the difference if single specimens only are compared. The specific value of *N. septentrionalis* is, in my opinion, open to question.

NESTOR ESSLINGI Souancé (Cat. B. xx. p. 8).

The value of *N. esslingi* as a species also appears questionable.

NESTOR NORFOLCENSIS Pelz. (Cat. B. xx. p. 10); Lorenz, Verh. z.-b. Ges. Wien, 1896, p. 199; Forbes & Robinson, Bull. Liverp. Mus. i. p. 5, pl. i. (1897).

First Dr. Lorenz, then Dr. Forbes and Mr. Robinson (*ll. cc.*), have expressed some doubt as to *N. norfolcensis* being different from *N. productus*; but as the two birds inhabit two different islands, I should say that they would probably be separable.

NESTOR PRODUCTUS Gould; Tristr. Ibis, 1892, p. 557; Lorenz, Verh. z.-b. Ges. Wien, 1896, p. 199; Scat. Ibis, 1896, p. 590; Orn. Monatsb. v. p. 9 (1897).

Canon Tristram mentions specimens of this bird, now extinct, in the Norwich, Cambridge, and Liverpool (Derby) Museums; Dr. Scater has inspected one in the Göttingen Museum, and another is stated to be in the Museum at Birmingham.

Fam. II. LORIIDÆ (op. cit. p. 18).

Many additions have been made to this family since the publication of the 'Catalogue,' but only a few forms can stand as really distinct species, and many of them are scarcely of the rank of subspecies.

The family has been the subject of an illustrated monograph by Dr. Mivart, who has figured several species for the first time, but the most important additional information relating to it is that published by Mr. Rothschild and Dr. Hartert.

CHALCOPSITTACUS Bp.

CHALCOPSITTACUS ATER (Scop.); Mivart, Mon. Lor. pl. i. fig. 1 (1896).

Chalcopsittacus ater ater Rothsch. & Hartert, Nov. Zool. viii. p. 64 (1901).

CHALCOPSITTACUS BERNSTEINI (Rosenb.); Mivart, Mon. Lor. pl. i. fig. 2 (1896).

Chalcopsittacus ater bernsteini Rothsch. & Hartert, Nov. Zool. viii. p. 64 (1901).

Besides the dark-red tibiæ and the edge of the forehead tinged with the same colour, Rothschild and Hartert call attention to another character of this species, namely, the red patch on the inner web of the primaries, although it is not present in every specimen.

CHALCOPSITTACUS INSIGNIS Oust.; Mivart, Mon. Lor. pl. ii. (1896).

This bird, which is confined to Ambernon Island, in Geelvink Bay, has not been met with again*.

Dr. Mivart's plate is not a very faithful representation of the bird; at least one of the types of *C. bruijnii* preserved in the Museum of Turin differs in having the anterior and upper parts of the cheeks more extensively red, the black part of the feathers of the lower parts with a purple gloss, and the tail not so greenish round the tip and not so bright yellow at the tip underneath; besides, the concealed parts of the tail-feathers shew on the inner web a well-defined bright red patch.

CHALCOPSITTACUS STAVORINI (Less.).

Concerning this long-lost species no additional information has come to hand.

CHALCOPSITTACUS DUYVENBODEI Dubois; Rothsch. Nov. Zool. i. p. 677 (1894); Mivart, Mon. Lor. pl. iii. (1896); Dubois, Syn. Av. p. 28, n. 356 (fasc. i. 1899); Sharpe, Hand-

* Since this remark was written, Dr. Hartert has informed me that the Tring Museum has received specimens of this rare bird from a plumassier in London.

list, ii. p. 2 (1900); Rothsch. & Hartert, Nov. Zool. viii. p. 65 (1901).

Hab. North coast of New Guinea from Takar (*Doherty*) to Stephansort (*Capt. Cotton & Webster*) in Kaiser-Wilhelm's Land.

The exact habitat of this bird has been discovered since the publication of the Catalogue.

CHALCOPSITTACUS SCINTILLATUS (Temm.); Mivart, Mon. Lor. pl. iv. figs. 1, 3 (1896).

Chalcopsittacus scintillatus scintillatus Rothsch. & Hartert, Nov. Zool. viii. p. 64 (1901).

CHALCOPSITTACUS CHLOROPTERUS Salvad.; Mivart, Mon. Lor. pl. iv. fig. 2 (1896).

Chalcopsittacus scintillatus chloropterus Rothsch. & Hartert, Nov. Zool. viii. p. 65 (1901).

Eos Wagl.

EOS CYANOGENYS Bp.; Mivart, Mon. Lor. p. 19, pl. v. (1896).

Eos cyanogenia Bp.; Rothsch. & Hartert, Nov. Zool. viii. p. 65 (1901).

Dr. Mivart makes me say that Finsch's *Domicella schlegeli* was established on a young bird of this species. This is a mistake. I said (P. Z. S. 1878, p. 86) that it was the young of *E. rubra*.

EOS RETICULATA (S. Müll.); Mivart, Mon. Lor. pl. vi. (1896); Hartert, Nov. Zool. vii. p. 19 (Dammer and Little Key I.) (1900); viii. p. 5 (Toal, Little Key) (1901), p. 165 (Tenimber I. only) (1901); Finsch, Notes Leyd. Mus. xxii. p. 285 (Babber) (1901).

This bird inhabits only the Tenimber Islands. The specimens sent by Mr. Kühn to the Tring Museum from Dammer, in the Banda Sea, and from Toal, Little Key, appear, from his later statements, to have been introduced both at Toal and Dammer.

EOS HISTRIO (P. L. S. Müll.); Mivart, Mon. Lor. pl. vii. figs. 1-3 (1896).

Eos TALAUTENSIS Meyer & Wiglesw.

Eos histrio part., *Salvad. Cat. Birds Brit. Mus.* xx. p. 21, spec. *g*, Saha I. (Talaut Isl.) (1891).

Eos histrio talautensis Meyer & Wiglesw. *Journ. f. Orn.* 1894, p. 240; *Hartert, Nov. Zool.* v. p. 88 (1898).

Eos histrio var. *talautensis* Mivart, *Mon. Lor.* p. 24A (1896); *Dubois, Syn. Av.* p. 28 (1899).

Eos talautensis Sharpe, *Hand-list*, ii. p. 2, n. 4 (1900).

According to Dr. Meyer and Mr. Wiglesworth, the Talaut Lory differs from *E. histrio* in having the upper wing-coverts almost entirely red, with scarcely any mixture of black, and the black band at the tip of the secondaries narrower (2–5 mm. broad, instead of 7–12 mm.).

The difference appears to be very small; still Dr. Hartert declares that he has had no difficulty in distinguishing every one of the series from the typical *E. histrio*.

Hab. Talaut Islands.

Eos CHALLENGERI *Salvad.*; Mivart, *Mon. Lor.* pl. vii. fig. 2 (1896).

Dr. Mivart is not inclined to give to this species a higher rank than that of a variety or subspecies.

Eos CARDINALIS (G. R. Gr.); Mivart, *Mon. Lor.* pl. viii. (1896); *Rothsch. & Hartert, Nov. Zool.* viii. p. 186 (Florida, Kulambangra), p. 378 (Guadalecanar) (1901); ix. p. 588 (Ysabel), p. 594 (Treasury I.) (1902).

Eos RUBRA (Gm.); Mivart, *Mon. Lor.* pl. ix. (1896); Sharpe, *Hand-list*, ii. p. 2 (1900).

Eos kuhni *Rothsch. Nov. Zool.* v. pp. 110, 509 (= *E. rubra* juv. from Ké Islands) (1898).

Eos bornea (L.); *Rothsch. Nov. Zool.* v. p. 509 (1898); *Hartert, Nov. Zool.* viii. p. 4 (Key I.) (1901).

Eos borneus (L.); *Rothsch. Nov. Zool.* viii. pl. xviii. fig. 1 (juv.) (1898).

Eos bornea bornea *Hartert, Nov. Zool.* vii. p. 229 (1900); viii. p. 5 (1901).

Whether the Ké-Island bird, which is decidedly larger

than those from Amboina and Ceram, deserves specific distinction is still uncertain.

Eos CYANONOTA (Vieill.).

Psittacus cyanonotus Vieill. Nouv. Dict. xxv. p. 334 (1817) (*ex* Levaill. pl. 93).

Eos rubra part., Salvad. Cat. Birds Brit. Mus. xx. p. 23 (1891).

Eos bornea (!) *cyanonotus* Hartert, Nov. Zool. vii. pp. 228, 229 (1900); viii. p. 5 (1901).

All authors who have treated of *E. rubra* (Wallace, Schlegel, Finsch, and myself, Orn. Pap. e Mol. i. pp. 253-254) have noticed that the Buru birds are somewhat smaller and of a deeper red. Dr. Hartert considers the differences as of subspecific value.

Eos SEMILARVATA Bp.; Mivart, Mon. Lor. pl. x. (1896).

The habitat of this rare species is still unknown.

Eos WALLACEI Finsch; Mivart, Mon. Lor. pl. xi. (1896).

Eos INSULARIS Guillem.; Mivart, Mon. Lor. pl. xii. (1896).

Eos RICINIATA (Bechst.); Mivart, Mon. Lor. pl. xiii. (1896).

Eos variegata (Gm.); Sharpe, Hand-list, ii. p. 2, n. 11 (1900).

Eos riciniatus Hartert, Nov. Zool. x. p. 46 (Batjan) (1903).

The preference for the name *E. variegata* (Gm.), advocated by Mr. Rothschild, does not seem to me to be fully justified; it appears that Dr. Hartert has arrived at the same conclusion.

Eos OBIENSIS Rothsch.

Lorius riciniatus part., Schleg. Mus. P.-B. *Revue*, p. 57 (Obi Major) (1874).

Eos riciniata part., Salvad. Orn. Pap. e Mol. i. p. 263 (Obi) (1880); Guillem. P. Z. S. 1885, p. 564 (part., specim. r, Obi Major); Salvad. Cat. B. xx. p. 28 (part., Obi) (1891).

Eos variegata obiensis Rothsch. Bull. B. O. C. x. p. xvi (1899).

Eos obiensis Sharpe, Hand-list, ii. p. 2, n. 12 (1900).

Eos riciniatus obiensis Hartert, Nov. Zool. x. p. 5 (1903).

From Mr. Rothschild's description, it appears that adult examples of this species have no purple occiput or purple collar round the neck, and all the greater wing-coverts and scapulars black; while other individuals, probably younger, exhibit a wide collar and a purple patch on the occiput, the latter, however, not being connected with the collar. These individuals, according to Mr. Rothschild, can only be distinguished from typical *E. variegata* (= *riciniata*) by the greater extent of the black colour on the wings.

Hab. Obi Major.

Dr. Hartert confirms the characters pointed out by Mr. Rothschild; but he adds that younger individuals may be sometimes indistinguishable from Batjan, Halmahera, and Ternate specimens (= *E. riciniata*).

Eos RUBIGINOSA (Bp.); Mivart, Mon. Lor. pl. xiv. (1896).

Eos FUSCATA Blyth; Mivart, Mon. Lor. pl. xv. (1896); Martorelli, Ibis, 1897, pp. 60-63; Rothsch. & Hartert, Nov. Zool. viii. p. 65 (1901).

It appears that this bird is dimorphic, there being a red and a yellow form; it follows that the yellow marks are not characteristic of the female, as stated in the 'Catalogue of Birds,' xx. p. 31.

LORIUS Vig.

LORIUS HYPENOCROUS G. R. Gr.; Mivart, Mon. Lor. pl. xvi. (1896); Hartert, Nov. Zool. v. p. 530 (1898).

Lorius hypenochrous hypenochrous Rothsch. & Hartert, Nov. Zool. viii. p. 66 (1901).

Dr. Hartert would restrict the habitat of this species to the Louisiade group (Rossell and Sudest Islands).

LORIUS DEVITTATUS Hartert.

Lorius hypenochrous part., Salvad. Cat. Birds Brit. Mus. xx. p. 32 (1891).

Lorius hypenochrous devittatus Hartert, Nov. Zool. v. p. 530 (1898); Rothsch. & Hartert, op. cit. viii. p. 66 (1901).

Lorius devittatus Sharpe, Hand-list, ii. p. 3, no. 2 (1900).

According to Dr. Hartert, this form differs from typical

L. hypæochrous in lacking the black bar at the tip of the longer wing-coverts.

Hab. Fergusson I. (type), Woodlark I., New Britain, New Ireland, New Hanover, and the low country of S.E. New Guinea.

This form appears to me very doubtful, especially as the birds of St. Aignan are intermediate between *L. hypæochrous* and *L. devittatus*, "having an indication of a black bar, some of the outermost [longer] under wing-coverts being blackish" (*Hartert*). In the allied species *L. lory* the black band at the tip of the longer under wing-coverts is a sign of immaturity.

LORIUS LORY (Linn.); Mivart, Mon. Lor. pl. xvii. fig. 1 (1896).

Lorius lory lory Rothsch. & Hartert, Nov. Zool. viii. p. 63 (1901).

LORIUS LORY subsp. MAJOR Rothsch. & Hartert.

Lorius lory, part., Guillem. P. Z. S. 1885, p. 621 (Waigiou); Salvad. Cat. B. Brit. Mus. xx. p. 33 (Waigiou).

Lorius lory major Rothsch. & Hartert, Nov. Zool. viii. p. 66 (Waigiou) (1901).

Similar to *L. lory* and scarcely different, only having the wing somewhat longer (not shorter, as by mistake has been stated by the authors of the subspecies); wing 167–175 and even 179 mm., against 160 to 165 and even 168 mm. in typical *L. lory*.

Hab. Waigiou.

LORIUS ERYTHROTHORAX Salvad.; Mivart, Mon. Lor. pl. xviii. fig. 2 (1896).

Lorius erythrothorax rubiensis Meyer, Abh. Mus. Dresd. 1892–93, no. 3, p. 10 (1893).

Lorius rubiensis Sharpe, Hand-list, ii. p. 3, no. 5 (1900).

Lorius lory erythrothorax Rothsch. & Hartert, Nov. Zool. viii. p. 66 (1901).

Hab. New Guinea, except the northern peninsula, and perhaps also the eastern part.

In the Tring Museum there are specimens of this species from Kapaur, from Etna and Triton Bays, from Ron Island

in the southern part of Geelvink Bay, from British New Guinea, and from Kaiser Wilhelm's Land.

LORIUS JOBIENSIS (Meyer); Mivart, Mon. Lor. pl. xviii. fig. 1 (1896).

Lorius lory jobiensis Rothsch. & Hartert, Nov. Zool. viii. p. 67 (1901).

Lorius lory, subsp.?, Rothsch. & Hartert, *ibid.* p. 67 (Takar) (1901).

It appears to me that specimens from Takar, which only differ from those of Jobie in having a shorter wing (160 mm. against 175 mm.), cannot be separated from *L. jobiensis*; it is a well-known fact that many species of Jobie Island extend to the northern coast of New Guinea, east of Geelvink Bay.

LORIUS SALVADORII Meyer; Mivart, Mon. Lor. pl. xix. (1896).

Lorius lory salvadorii Rothsch. & Hartert, Nov. Zool. viii. p. 67 (1901).

"This form differs from *L. jobiensis* mainly in its much smaller size, especially as regards the bill and wings; the latter measuring only about 160 mm. Besides the smaller size, the red of the breast is somewhat more scarlet, without a rosy tinge; the hind-neck and upper back are deeper, almost black; the upper abdomen is also generally darker, the under tail-coverts generally, but not always, deeper blue. The smaller size is the most constant character of this form."

Hab. "Common near Konstantinhafen and Astrolabe Bay in German New Guinea" (*R. & H.*).

LORIUS CYANAUCHEN (S. Müll.); Mivart, Mon. Lor. pl. xx. (1896).

Lorius lory cyanauchen Rothsch. & Hartert, Nov. Zool. viii. p. 67 (1901).

LORIUS DOMICELLA (Linn.); Mivart, Mon. Lor. pl. xxi. (1896).

LORIUS CHLOROCERCUS Gould; Mivart, Mon. Lor. pl. xxii. (1896).

LORIUS TIBIALIS Scat. ; Mivart, Mon. Lor. pl. xxii. (1896).
The habitat of this species is still unknown.

LORIUS GARRULUS (Linn.); Mivart, Mon. Lor. pl. xxiv.
fig. 1 (1896).

LORIUS FLAVOPALLIATUS Salvad. ; Mivart, Mon. Lor.
pl. xxiv. fig. 2 (1896).

Lorius garrulus flavopalliatus Hartert, Nov. Zool. x. pp. 4,
46 (1903).

CALLIPTILUS Sund.

CALLIPTILUS SOLITARIUS (Lath.); Mivart, Mon. Lor. pl. xxv.
(1896).

VINIA Less.

Vinia (nomen emend.) Sharpe, Hand-list, ii. p. 4 (1900).

VINIA AUSTRALIS (Gm.); Sharpe, l. c.

Vini australis Salvad. ; Mivart, Mon. Lor. pl. xxvi. fig. 1
(1896).

VINIA KUHLLII (Vig.); Sharpe, op. cit. p. 4.

Vini kuhllii Salvad.; Mivart, Mon. Lor. pl. xxvi. fig. 2
(1896).

CORIPHILUS (Wagl.).

CORIPHILUS TAITIANUS (Gm.); Mivart, Mon. Lor. pl. xxvii.
fig. 1 (1896); Forbes & Robins. Bull. Liverp. Mus. i. p. 6,
pl. ii. fig. 1 (var.) (1897).

Sparman (Mus. Carls. fasc. ii. pl. xxvii.) has described
and figured as *Psittacus cyaneus* an entirely blue bird with no
white on the cheeks and throat; it may possibly belong to a
distinct species. Similar to it appears to be the bird figured
by Forbes and Robinson (*l. c.*), but I should think that the
latter was an immature specimen of *C. taitianus*.

CORIPHILUS ULTRAMARINUS (Kuhl); Mivart, Mon. Lor.
pl. xxvii. fig. 2 (1896).

TRICHOGLOSSUS Vig. & Horsf.

The key to the species in the 'Catalogue of Birds'
requires some alteration on account of the additional forms
recently described and the better knowledge we now have of
some of the species, especially of *Trichoglossus forsteni*.

Revised Key to the Species of Trichoglossus.

- A. Quills with a coloured band underneath towards the base.
- a. Band towards the base of the quills underneath yellow.
- a'. Band across the nape greenish yellow.
- a''. Middle of the abdomen not blue.
- a'''. Breast mostly yellow; occiput bright green *T. hæmatodes.*
- b'''. Breast red.
- a⁴. Head not entirely blue.
- a⁵. Breast-feathers red, with no tinge of yellow towards the edges (except in young or immature birds).
- a⁶. No dark cross-bands on the breast of adult birds.
- a⁷. Forehead bluish.
- a⁸. Purple patch behind the green collar smaller. *T. forsteni.*
- b⁸. Purple patch behind the green collar large and conspicuous *T. djampeanus.*
- b⁷. Forehead greenish (*vide Rothschild & Hartert*) *T. mitchelli.*
- b⁶. Breast with dark cross-bands.
- c⁷. Dark cross-bands on the breast much broader and very conspicuous.
- c⁶. Ear-coverts blue *T. cyanogrammus.*
- d⁸. Ear-coverts greenish. *T. intermedius.*
- d⁷. Dark cross-bands on the breast much narrower.
- e⁸. Upper parts grass-green *T. massena.*
- f⁸. Upper parts olive-green *T. flavicans.*
- b⁵. Breast-feathers red, slightly tinged with yellow towards the edges; forehead and cheeks blue *T. nigrogularis.*
- b⁴. Head entirely blue *T. cæruleiceps.*
- b'. Middle of the abdomen blue; head entirely blue *T. novæ-hollandiæ.*
- b'. Band across the nape orange *T. rubritorques.*
- b. Band towards the base of the quills underneath red. *T. rosenbergi.*
- B. Quills with no coloured band beneath; cheeks and breast red *T. ornatus.*

TRICHOGLOSSUS HÆMATODES (Linn.); Mivart, Mon. Lor. pl. xxviii. (1896); Finsch, Notes Leyd. Mus. xxii. p. 285 (1901).

Trichoglossus hæmatodus Hartert, Nov. Zool. v. p. 119 (Timor) (1898).

Trichoglossus hæmatodus hæmatodus Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901); Hartert, Nov. Zool. xi. p. 192 (Wetter and Roma) (1904).

Hab. Timor, Semaio, Wetter, Roma, and Sumba.

The form from Sumba has been described by Dr. Hartert as a subspecies under the name of *Trichoglossus hæmatodes fortis* (Nov. Zool. v. p. 120, 1898); he says (*op. cit.* viii. p. 68) that it is "perfectly similar to the typical *T. hæmatodes*, only (bill and wings) larger, besides some minor difference in coloration." As to size, the wing has 147–156 mm. against 144–154 mm. in *T. hæmatodes*. As to coloration, *T. fortis* has the blue on the head less bright and less extended on the crown, besides a distinct green line under the eye as well as above it, mostly but not always present. In Sharpe's 'Hand-list,' ii. p. 4, there is a note from Dr. Finsch (*in litt.*) stating that *T. fortis* is "not distinct from *T. hæmatodes*, the differences being due to age. Both forms from Wetter are in the Leyden Museum."

The synonymy of this form, if separated, would be as follows:—

Trichoglossus hæmatodes Meyer, Verh. z.-b. Ges. Wien, 1881, p. 762 (Sumba); Hartert, Nov. Zool. iii. p. 586 (Sumba: agrees exactly with specimens from Timor) (1896); Finsch, Notes Leyd. Mus. xxii. p. 285 (1901).

Trichoglossus hæmatodes fortis Hartert, Nov. Zool. v. pp. 120, 472 (1898) (Sumba); Rothsch. & Hartert, *op. cit.* viii. p. 68 (1901); Hartert, *op. cit.* xi. p. 192 (1904).

Trichoglossus fortis Sharpe, Hand-list, ii. p. 4, no. 2 (1900).

Trichoglossus hæmatodus fortis Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901).

TRICHOGLOSSUS FORSTENI (Temm.); Hartert, Nov. Zool. iii. p. 176 (part.) (1896); Mivart, Mon. Lor. pl. xxix. (1896);

Hartert, Nov. Zool. iii. p. 572 (Bima) (1896); Forbes & Robins. Bull. Liverp. Mus. i. no. 1, p. 6 (1897).

Trichoglossus hæmatodus forsteni Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901).

To my description of the adult in the 'Catalogue of Birds' must be added indications of a purple-blue patch behind the light green collar. This patch is wanting in the *young bird*, which differs also in having the red breast-feathers with a yellow tinge and dark green edges; the middle of the abdomen is green, not purple.

Forbes and Robinson rightly notice that "in the figure of *T. forsteni* in Mivart's Monograph the yellow-green ring, though described in the text, has been entirely omitted."

TRICHOGLOSSUS DJAMPEANUS Hartert.

Trichoglossus forsteni, part., Hartert, Nov. Zool. iii. p. 176 (Djampea I.) (1896).

Trichoglossus forsteni djampeanus Hartert, Nov. Zool. iv. p. 172 (1897).

Trichoglossus djampeanus Sharpe, Hand-list, ii. p. 4, no. 4 (1900).

Trichoglossus hæmatodus djampeanus Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901).

"In every way like *T. forsteni*, from which it differs only in having a slightly longer wing and larger bill, the forehead deeper blue, and a large and conspicuous purple patch behind the light green collar" (*R. & H.*). The differences between the birds of Sumbawa and Djampea appear to me to be very small indeed and scarcely of even subspecific value.

It is interesting to notice that while Dr. Hartert, in last mentioning this form, places it as a subspecies of *T. hæmatodus*, he made it in the first description a subspecies of *T. forsteni*, to which in reality it is more nearly allied than to typical *T. hæmatodus*. It follows that Dr. Hartert would have been quite justified if he had used for the Djampean bird a quadrinomial *Trichoglossus hæmatodus forsteni djampeanus*, to shew that it is a form of *T. hæmatodus* and an under-subspecies of *T. forsteni*.

TRICHOGLOSSUS MITCHELLI G. R. Gr. ; Mivart, Mon. Lor. pl. xxxiii. (1896); Rothsch. & Hartert, Nov. Zool. iii. pp. 562, 565, 595, 596 (Lombok) (1896).

Trichoglossus hæmatodus mitchelli Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901).

Hab. Lombok.

The home of this species was not known when the 'Catalogue of the Parrots' was published; it has since been discovered in Lombok by Mr. Doherty, who has collected a large series for the Tring Museum. This series has shown that the two specimens in the British Museum are not fully adult, since they have the red breast-feathers with an orange or yellow tinge, which is wanting in the fully adult birds. For this reason, it appears, as stated by Rothschild and Hartert, that the "key of the species in the Catalogue is misleading," though it was not so at the time of its publication, according to the materials then at hand.

TRICHOGLOSSUS CYANOGRAMMUS Wagl. ; Mivart, Mon. Lor. pl. xxx. fig. 1 (1896); Hartert, Nov. Zool. vii. p. 329 (Buru) (1900).

Trichoglossus hæmatodus cyanogrammus Hartert, Nov. Zool. viii. p. 4 (Key I., Teor, Koer, Kisoei, Goram-laut, and Mahawoka) (1901); Rothsch. & Hartert, Nov. Zool. viii. p. 69 (1901).

The common species of *Trichoglossus* in the Key Islands being *T. nigrogularis*, the alleged presence of *T. cyanogrammus* in the same islands appears to be very strange, unless the bird has been introduced there by man, as has been the case with *Eos reticulata*. Dr. Hartert mentions two specimens labelled "Key Islands" in the Tring Museum.

TRICHOGLOSSUS INTERMEDIUS Rothsch. & Hartert.

Trichoglossus nigrogularis Madarász (nec Gray), Termés. Füzetek, x. p. 42 (Gauta-Fluss) (1892).

Trichoglossus cyanogrammus Madarász, Termés. Füzetek, xxii. p. 414 (Stephansort) (1899).

Trichoglossus hæmatodus intermedius Rothsch. & Hartert, Nov. Zool. viii. p. 70 [Stephansort] (1901); iid. Ann. Mus. Nat. Hungar. i. p. 450 (Kaiser-Wilhelmsland) (1903).

Trichoglossus intermedius Madarász, Termés. Füzetek, xxv. p. 351 (1902).

This form, though intermediate between *T. cyanogrammus* and *T. massena*, appears to be scarcely of subspecific value, as, even according to its authors, it has no separate area, extending from Kaiser-Wilhelm's Land to Western New Guinea, within the area inhabited by *T. cyanogrammus*.

TRICHOGLOSSUS MASSENA Bp. ; Mivart, Mon. Lor. pl. xxxi. fig. 1 (1896).

Trichoglossus hæmatodus massena Rothsch. & Hartert, Nov. Zool. viii. p. 70 (1901).

TRICHOGLOSSUS FLAVICANS Cab. & Rehnw. ; Mivart, Mon. Lor. pl. xxxii. (1896).

Trichoglossus hæmatodus flavicans Rothsch. & Hartert, Nov. Zool. viii. p. 11 (1901).

TRICHOGLOSSUS NIGROGULARIS G. R. Gr. ; Mivart, Mon. Lor. pl. xxx. fig. 2 (1896).

Trichoglossus hæmatodus nigrigularis Hartert, Nov. Zool. viii. p. 3 (Key I.) (1901); Rothsch. & Hartert, Nov. Zool. viii. p. 69 (1901).

TRICHOGLOSSUS CÆRULEICEPS D'Alb. & Salvad. ; Mivart, Mon. Lor. pl. xxxiv. (1896).

Trichoglossus hæmatodus cæruleiceps Rothsch. & Hartert, Nov. Zool. viii. p. 71 (1901).

TRICHOGLOSSUS NOVÆ-HOLLANDIÆ (Gmel.) ; ? Mivart, Mon. Lor. pl. xxxv. (1896).

TRICHOGLOSSUS SEPTENTRIONALIS Robinson.

Trichoglossus novæ-hollandiæ Hartert, Nov. Zool. vi. p. 428 (Cape York) (1899).

Trichoglossus novæ-hollandiæ, var. *septentrionalis* Robins. Bull. Liverp. Mus. ii. p. 115 (1900).

Trichoglossus septentrionalis Robins. *ibid.*; Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901).

Trichoglossus novæ-hollandiæ septentrionalis Robins. & Laverock, *Ibis*, 1900, p. 642.

I am not quite satisfied that specimens of the *Trichoglossus* from Northern Australia are distinct from the typical *T. novæ-hollandiæ*. Dr. Hartert has noticed that they are rather small and more brightly coloured. Mr. Robinson also states that they are smaller and have the head and the abdominal patch bright blue and not purplish.

TRICHOGLOSSUS RUBRITORQUES Vig. & Horsf. ; Mivart, Mon. Lor. pl. xxxvii. (1896).

Trichoglossus hæmatodus rubritorquis Hartert, Nov. Zool. xi. p. 193 (1904) (Kisser, Roma ?), xii. p. 211 (1905, N.W. Australia).

Dr. Hartert rightly remarks that a specimen from Kisser was probably introduced by man. Most strange it appears that a specimen intermediate between *T. rubritorques* and *T. hæmatodes* should have been shot in Roma; it is in the Tring Museum.

TRICHOGLOSSUS ROSENBERGI Schleg. ; Mivart, Mon. Lor. pl. xxxviii. (1896).

Trichoglossus hæmatodus rosenbergi Rothsch. & Hartert, Nov. Zool. viii. p. 71 (1901).

TRICHOGLOSSUS ORNATUS (Linn.) ; Mivart, Mon. Lor. pl. xxxix. (1896) ; Hartert, Nov. Zool. iii. p. 161 (Indrulaman) (1896), iv. pp. 159, 165 (1897), v. p. 88 (Talaut group) (1898) ; Rothsch. & Hartert, Nov. Zool. viii. p. 68 (1901) ; Hartert, Nov. Zool. x. p. 22 (Kalidupa) (1903).

Besides the above-mentioned species of *Trichoglossus*, two others have been mentioned.

TRICHOGLOSSUS VERREAUXIUS Bp. Rev. et Mag. de Zool. 1854, p. 157 (Australasia) ; Mivart, Mon. Lor. pl. xxxvi. (1896) ; Sharpe, Hand-list, ii. p. 5, n. 13 (1900).

TRICHOGLOSSUS COCCINEIFRONS G. R. Gr. P. Z. S. 1858, pp. 183, 194 (Aru I.) ; Mivart, Mon. Lor. pl. xxxi. fig. 2 (1896) ; Sharpe, Hand-list, ii. p. 5, n. 9 (1900).

I have not the least doubt that these supposed species are based on abnormal individuals, perhaps hybrids.

PSITTEUTELES Bp.

PSITTEUTELES FLAVOVIRIDIS (Wall.) ; Mivart, Mon. Lor. pl. xl. (1896).

PSITTEUTELES MEYERI (Wald.) ; Mivart, Mon. Lor. pl. xli. fig. 1 (1896).

PSITTEUTELES BONTHAINENSIS (Meyer) ; Mivart, Mon. Lor. pl. xli. figs. 2, 3 (1896).

This form appears to differ from *P. meyeri* only in having the green bands on the under parts somewhat broader.

PSITTEUTELES EUTELES (Temm.) ; Sharpe, Ann. & Mag. N. H. (ser. 6) vol. xiv. p. 58 (Dammer) (1894) ; Mivart, Mon. Lor. pl. xlii. (1896) ; Hartert, Nov. Zool. v. p. 461 (Alor, Pantar, Lomblen) (1898), vii. p. 19 (Dammer) (1900).

Trichoglossus alorensis Finsch, Notes Leyd. Mus. xx. p. 226 (Alor) (1899) ; Hartert, Nov. Zool. vii. p. 19 (1900) (= *P. euteles* juv.) ; Finsch, Notes Leyd. Mus. xxii. p. 287, note (1904) (not = *P. euteles* juv.).

Psitteuteles alorensis Sharpe, Hand-list, ii. p. 6, n. 5 (1900).

Trichoglossus euteles Finsch, Notes Leyd. Mus. xxii. p. 286 (Letti, Wetter, Alor, Babber, Kisser) (1904) ; Hartert, Nov. Zool. xi. p. 193 (1904).

According to Dr. Hartert, *P. alorensis* Finsch, from Alor, is the young of *P. euteles* ; but this statement seems to require confirmation, as in the same place Dr. Hartert, mentioning specimens from Dammer, admits the possibility of these being subspecifically different from typical *P. euteles* from Timor, and those from Alor and Pantar intermediate.

The statement that *P. euteles* occurs in Flores (*Wallace*) is open to question, since in that island the next allied species has been found.

PSITTEUTELES WEBERI Büttik. in Weber, Zool. Ergebn. e. Reise in Niederl. O.-Ind. iii. p. 290, pl. xvii. fig. 1 (1894) ; Forbes & Robins. Bull. Liverp. Mus. i. no. 1, p. 7 (1897) ; Rothsch. Bull. B. O. C. vi. p. lxiv (1897) ; Hartert, Nov.

Zool. v. p. 43 (1898); Sharpe, Hand-list, ii. p. 6, n. 6 (1900).

Psitteuteles euteles, part., Mivart, Mon. Lor. p. 129 (1896).

Similar to *P. euteles*, "but the much larger bill, the green head with bluish forehead in the old bird, the yellowish collar on the hind-neck, and the wide yellowish band across the chest distinguish *P. weberi*" (*Hartert*). Wing 120-126 mm.; tail 90-95; tarsus 12; bill in a straight line from the forehead to the tip 20, depth of bill at the base 18.

Hab. Flores (*Büttikofer*, *Everett*).

PSITTEUTELES CHLOROLEPIDOTUS (Kuhl); Mivart, Mon. Lor. pl. xliii. (1896).

Psitteuteles neglectus Reichenow, Orn. MB. vi. p. 4 (1898) (N. Queensland); Sharpe, Hand-list, ii. p. 6, n. 8 (1900).

Psitteuteles chlorolepidotus neglectus Robins. & Lavrock, Ibis, 1900, p. 642 (Cooktown and Cairns).

P. neglectus has been established on the rather smaller dimensions of the North Queensland specimens, but "some of the examples from Cairns are rather larger, approaching the typical form" (*R. & L.*).

Gen. — ?

TRICHOGLOSSUS JOHNSTONÆ *Hartert*, Bull. B. O. C. xiv. p. 10 (Mt. Apo) (1903).

♂ ♀ *ad.* Forehead dark rosy red, in the male obscured by greenish tips to the feathers. Narrow loreal line and broad line backwards from the eyes meeting (in the female indistinctly) on the nape dark brownish purple (not quite as dark as "prune-purple" (*Ridgway*, *Nomencl. Col. pl. viii. fig. 1*). Rest of crown and whole upper surface grass-green, the inner webs of the remiges and the first primary on both webs black, all, with the exception of the first three, with a large sulphur-yellow patch in the middle of the inner webs. Feathers round the mandible to the ear-coverts dark rose-red, those towards the ear-coverts with yellowish-green tips. Feathers of under surface dull sulphur-yellow, with grey

bases and broad green tips; lower abdomen and under tail-coverts more greenish yellow, the green tips less distinct. Under wing-coverts yellowish green, those near the edge of the wing dark green, and some of the longest pale yellow; tail from below greenish or brownish yellow. Wing 106–108 mm.; tail 71–74; bill from cere to tip, ♂ 14.5, ♀ 12; metatarsus about 13. “Bill yellowish red.”

Hab. Mt. Apo, S. Mindanao, 8000 feet.

“This curious new Parrot resembles in its breast-markings the Celebesian *Psittuteles meyeri* very closely, but the coloration of the head is more like that of *Ptilosclera versicolor*. It would connect the genera *Psittuteles* and *Ptilosclera*, which are said to differ by their coloration only” (*Hartert*).

It is interesting to notice that until the discovery of this species no member of the *Loriidae* had been found in the Philippines.

PTILOSLERA Bp.

PTILOSLERA VERSICOLOR (Vig.); Mivart, Mon. Lor. pl. xlv. (1896).

Trichoglossus versicolor Hartert, Nov. Zool. xii. p. 211 (1905).

GLOSSOPSITTACUS Bp.

GLOSSOPSITTACUS GOLDIEI (Sharpe); Mivart, Mon. Lor. pl. xlv. fig. 1 (1896); Rothsch. & Hartert, Nov. Zool. viii. p. 71 (1901).

Glossoptilus (!) *goldiei* Hartert, Nov. Zool. iii. p. 532 (1896).

GLOSSOPSITTACUS CONCINNUS (Shaw); Mivart, Mon. Lor. pl. xlv. fig. 2 (1896).

GLOSSOPSITTACUS PORPHYROCEPHALUS (Dietrichsen); Mivart, Mon. Lor. pl. xlvi. fig. 1 (1896).

GLOSSOPSITTACUS PUSILLUS (Shaw); Mivart, Mon. Lor. pl. xlvi. fig. 2 (1896).

HYPOCHARMOSYNA Salvad.

HYPOCHARMOSYNA WILHELMINÆ (Meyer); Mivart, Mon. Lor. pl. xlvii. (1896); Rothsch. & Hartert, Nov. Zool. viii. p. 71 (1901).

HYPOCHARMOSYNA PLACENS (Temm.); Mivart, Mon. Lor. pl. xlvi. (1896).

Hypocharmosyna placentis (!) Hartert, Nov. Zool. vii. p. 229 (Amblau, south of Buru) (1900), x. pp. 5 (Obi), 46 (Batjan) (1903).

Hypocharmosyna placentis placentis Hartert, Nov. Zool. viii. p. 4 (Little Key, Great Key, Koer Islands, Manggoer, and Goram laut) (1901); Rothsch. & Hartert, Nov. Zool. viii. p. 71 (1901).

I believe that this species may be divided into several subspecies—probably five, if not more; of five I have given the characters in my ‘Ornitologia della Papuasias e delle Molucche’ (vol. i. p. 310), and they were tabulated there as follows:—

- I. Gastræo viridiores, minime flavicantes; macula uropygiali cyanea mediocri; maris pileo pallide viridi, minime flavicante; genis cum mento et gula rubris Var. A, ex Halmahera.
- II. Gastræo pallidiores, viridi-flavicantes; maris pileo viridi-flavicante:
 - a. Uropygio latissime cyaneo; maris genis, mento et gula rubris Var. B, ex Nova Guinea.
 - b. Uropygio minus late cyaneo; maris genis rubris, mento et gula vix vel minime rubris:
 - a'. Maris mento et gula minus late rubris (Wallace) Var. C, ex Ceram.
 - b'. Maris mento et gula quamplurime vix vel minime rubris:
 - a''. Major; long. tot. mm. 175; caudæ mm. 74-72 Var. D, ex Kei.
 - b''. Minor; long. tot. mm. 165; caudæ mm. 72-65 Var. E, ex Aru.

HYPOCHARMOSYNA SUBPLACENS (Sclat.); Mivart, Mon. Lor. pl. xlix. (1896).

Hypocharmosyna placentis subplacens Rothsch. & Hartert, Nov. Zool. viii. p. 71 (Woodlark Island, Sattelberg) (1901).

It appears that Rothschild and Hartert are inclined to recognise several forms of this species, or subspecies as they consider it.

HYPOCHARMOSYNA RUBRONOTATA (Wall.); Mivart, Mon. Lor. pl. lii. (1896).

Dr. Mivart figures only the male, the female has not been depicted yet.

HYPOCHARMOSYNA KORDOANA (Meyer); Mivart, Mon. Lor. pl. li. (♂ ♀) (1896).

HYPOCHARMOSYNA RUBRIGULARIS (Selat.); Mivart, Mon. Lor. pl. l. fig. 1 (1896).

HYPOCHARMOSYNA AUREOCINCTA (Layard); Mivart, Mon. Lor. pl. l. figs. 2, 3 (1896).

HYPOCHARMOSYNA DIADEMATA (Verr. & Des Murs); Mivart, Mon. Lor. pl. liv. (1896).

Glossopsittacus diadematus Salvad. Cat. Birds Brit. Mus. xx. p. 68 (1891); Sharpe, Hand-list, ii. p. 6, n. 2 (1900).

Not having had the opportunity when I wrote the 'Catalogue of the Parrots' of inspecting an example of this species, and knowing it only from the original description and a rough sketch kindly sent me by the late M. Sallé, I was not at all sure about its generic place. I said that it might possibly belong to the genus *Hypocharmosyna*. This surmise has been fully confirmed by Mivart, who had the advantage of examining the type and only known specimen, which is in the Colonial Collection in the Palais de l'Industrie at Paris. Dr. Mivart's figure is the only one published of this rare species.

This bird belongs to the section of the genus with no yellow band on the under side of the quills, which are entirely dusky, and is easily distinguished by its blue crown.

The re-discovery of this species would be most interesting; very little has been done lately to investigate the fauna of New Caledonia, where it is said to be not uncommon.

HYPOCHARMOSYNA MEEKI Rothsch. & Hartert, Nov. Zool. viii. p. 187 (1901), ix. p. 590, pl. vii. fig. 3 (1903); Dubois, Syn. Av. p. 1055, n. 18 (fase. xiv., 1903).

"*Male ad.*—Upper surface grass-green, brighter on the forehead. Crown-feathers tipped with dark lead-colour,

before the lead-coloured tip a tiny bright green spot, so that the crown looks blackish grey with tiny green spots. Across the interscapulum an orange-brown band nearly a centimetre in width. Remiges black with grass-green outer edges. Lower surface light green, the feathers being yellowish towards the bases. Feathers behind the auricular region with brighter green shaft-lines. Rectrices green, all except the central pair with yellow tips to the inner webs and a narrow portion of the outer web, blackish from below and on the inner webs. Central pair dark green from above, blackish from below. Under wing-coverts green. Iris yellowish-red, feet pale orange or brownish-red, bill dark dirty red. Wing 81 to 86 mm., tail 75 to 78, bill about 13 mm."

Hab. Kulambangra, Solomon Is.

This species differs from *Hypocharmosyna palmarum* of the New Hebrides in the absence of red feathers near the base of the bill, in the absence of yellow tips to the central rectrices, and in the colour of the crown. It differs from *H. pygmæa*, the home of which is still unknown, in the absence of yellow tips to the central rectrices, in the colour of the crown, and in having a brownish-orange band across the back.

The Tring Museum has received three specimens, collected by Mr. A. S. Meek. The supposed male is slightly larger (wing 86) than the female (wing 81); otherwise the two sexes are alike.

HYPOCHARMOSYNA PALMARUM (Gm.); Mivart, Mon. Lor. pl. liii. fig. 1 (1896).

HYPOCHARMOSYNA PYGMÆA (Gm.); Mivart, Mon. Lor. pl. liii. fig. 2 (1896); Forbes & Robins. Bull. Liverp. Mus. i. no. 1, p. 7 (1897).

This species is known only from a single example, formerly in the Leverian Museum and now in the Imperial Museum at Vienna. It differs from *H. palmarum* in lacking the red feathers at the base of the bill and in being slightly smaller. Mr. Layard was of opinion that it might be the female of *H. palmarum*, and, as I have already said, I am much

inclined to agree with him. On the contrary, Dr. Mivart, after having examined the type, seemed not to be disposed to adopt Layard's view. The home of this bird is still unknown, a point which is in favour of Layard's opinion. The probability that the Pygmy Parrakeet is the same as *H. palmarum* is increased by what Dr. Forbes and Mr. Robinson write (*l. c.*):—"Under Pygmy Parrakeet, in Lord Derby's copy of Latham's Gen. Syn. i. pt. 2, p. 256. no. 60 (1787), occurs the following note in Lord Derby's handwriting: 'My specimen (marked as this species by Dr. Latham) came from New Holland, and answers well to his description, except in having a red band from eyes to the bill and over the front.' This specimen has unfortunately disappeared."

CHARMOSYNOPSIS Salvad.

CHARMOSYNOPSIS PULCHELLA (G. R. Gray); Mivart, Mon. Lor. pl. lv. (1896); Rothsch. & Hartert, Nov. Zool. viii. p. 72 (N.W. and S.E. New Guinea) (1901).

Charmosynopsis bella De Vis, Ann. Queensl. Mus. no. 5, pp. 12, 13, pl. viii. (1900).

Charmosyna bella Dubois, Syn. Av. p. 1055, no. 19 (fasc. xiv., 1903) (Wharton Range).

I believe that Mr. Rothschild has already stated that *C. bella* does not appear to be different from *C. pulchella*, and I quite agree with him.

CHARMOSYNOPSIS MARGARITÆ (Tristr.); Mivart, Mon. Lor. pl. lvi. (1896); Forbes & Robins. Bull. Liverp. Mus. i. no. 1, p. 7 (1897); Rothsch. & Hartert, Nov. Zool. viii. p. 187 (Kulambangra) (1901).

The types of this species, male and female, were formerly in Canon Tristram's collection, but only the female is now in the Liverpool Museum, the male type having been lost. The Tring Museum has received a large series (males, females, and immature birds) from Kulambangra; the latter "have the yellow collar above and below ill-defined, the purplish-black collar not developed, and purplish-black edges to the red feathers" (*R. & H.*).

CHARMOSYNA Wagl.

CHARMOSYNA PAPUENSIS (Gmel.); Mivart, Mon. Lor. pl. lvii. (1896).

CHARMOSYNA STELLÆ Meyer; Mivart, Mon. Lor. pl. lviii. (1896); Rothsch. Nov. Zool. iii. p. 18 (Eufa and Mount Victoria) (1896); Rothsch. & Hartert, Nov. Zool. viii. p. 72 (1901).

CHARMOSYNA JOSEPHINÆ (Finsch); Mivart, Mon. Lor. pl. lix. (1896); Rothsch. & Hartert, Nov. Zool. viii. p. 72 (1901).

The type of this species, a female, belongs to the Turati collection in the Museo Civico of Milan.

CHARMOSYNA ATRATA Rothsch. Bull. B. O. C. vii. p. liv (Mt. Scratchley) (1898); id. Ibis, 1898, p. 439; id. Nov. Zool. vi. p. 218 (Mt. Gaivara), pl. ii. fig. 1 (1899); Dubois, Syn. Av. p. 32, no. 413 (fasc. i., 1899); Sharpe, Hand-list, ii. p. 7, no. 4 (1900); Rothsch. Bull. B. O. C. xv. p. 7 (1904).

“Bill red; forehead purplish black, centre of the crown darker. A patch of elongated lilac-blue feathers on the occiput; neck and upper back black, with a reddish shade; under surface dull black, sides of the breast dark green; back and upper wing-coverts dark green; lower back, rump, and sides of the belly carmine; rump with a large patch of lilac-blue; upper tail-coverts dark purplish green; quills black, outer webs broadly bordered with dark green; rectrices green, with narrow edges near the tip, blackish towards the base, without any red; thighs purplish black; under tail-coverts dark purplish, with deep crimson tips; feet orange, with black claws. Wing 146 mm.” (*R.*)

Female. Similar to the male, but the lower back, rump, and sides of the belly not carmine but green, with a blue patch in the centre. Total length 234 mm.

Three specimens are known of this dark species: the type, certainly a male, from Mount Scratchley; a second, evidently a female, from Mount Gaivara, near Mount Victoria; and a third, apparently also a female, of which the locality is not given.

Mr. Rothschild says that at first he thought that the type of this species might be a melanistic specimen of *C. stellæ*, but was afterwards persuaded that the assumption could not be justified.

OREOPSITTACUS Salvad.

OREOPSITTACUS ARFAKI (Meyer); Mivart, Mon. Lor. pl. lx. (1896).

OREOPSITTACUS GRANDIS Ogilvie-Grant, Bull. B. O. C. v. p. xv (Owen Stanley Mountains) (no. xxxi., 1895); id. Ibis, 1896, p. 258; Mivart, Mon. Lor. pl. lxi. (1896); Rothsch. Nov. Zool. v. p. 510 (1898); Dubois, Syn. Av. p. 33, no. 415 (1899); Sharpe, Hand-list, ii. p. 7, no. 2 (1900); Rothsch. & Hartert, Nov. Zool. viii. p. 72 (1901).

Oreopsittacus viridigaster De Vis, Rep. Brit. New Guin. 1898, App. p. 81; Rothsch. Nov. Zool. v. p. 510 (1898) (= *O. grandis*).

Oreopsittacus chlorogaster (nom. emend.) Sharpe, Zool. Record, 1898, Aves, p. 43 (1899); Dubois, Syn. Av. p. 1055, no. 415 (fasc. xiv., 1903).

? *Oreopsittacus frontalis* Reichenow, Orn. Monatsb. viii. p. 186 (1900) (Aroa River, S.E. New Guinea).

Similar to *O. arfaki*, but somewhat larger; the male without any red on the abdomen, the female without any orange on the abdomen, which is uniform green.

Male. Upper parts dark green; the pileum bright red, but not so bright as in *O. arfaki*, while the red colour is more extended than in that species. The cheeks and ear-coverts are dark blue with white spots, but the blue is darker and the white spots are larger than in *O. arfaki*. There is no red on the abdomen, though there are some red feathers on the flanks, hidden under the wing. The breast and the abdomen are green and the under tail-coverts green and yellow. The thighs are dark green. The primaries are mainly blackish, but externally edged with blue, which is, however, much less bright than in *O. arfaki*. The under wing-coverts are red, and there is a yellow band beneath the wing, formed by yellow patches in the middle of the inner

webs of the quills. The tinge on the tail is of a somewhat darker blue than in the smaller species, and the tip of the tail is much more red.

The female has the plicum of a golden-green tint, and the abdomen is entirely green without any orange tint.

Total length 6·3 inches (=158 mm.), wing 3·5 (=87) tail 3·3 (=83), bill 0·7 (=15), tarsus 0·65 (=14).

Hab. S.E. New Guinea : Owen Stanley Mountains (types), Mount Scratchley, Mount Knutsford (*Antony*); ? Aroa River (*Waiske*).

The types of this species are in the British Museum; they have been figured in Dr. Mivart's Monograph.

There appears to be no doubt about the identity of *O. viridigaster* De Vis with *O. grandis*. I think that *O. frontalis* is based on immature specimens of *O. grandis*; the male has been described as having a narrow frontal red band, like immature male birds of *O. arfaki*.

[To be continued.]

XXVI.—*On the Display of the Lesser Bird-of-Paradise*
(*Paradisca minor*). By W. R. OGILVIE-GRANT.

(Plate VIII.)

OWING to the great difficulty and expense of procuring living examples of the Birds-of-Paradise (*Paradisceidæ*), comparatively few have reached the Zoological Society's Gardens in the Regent's Park. Since 1862 the Society has only managed to procure about eighteen specimens, representing seven different species, viz. :—

3 *Paradisca apoda*. Great Bird-of-Paradise.

(1 ♂, Oct. 1885; 1 ♂, June 1902; 1 ♂, March 1905.)

9 *Paradisca minor*. Lesser Bird-of-Paradise.

(2 ♂, April 1862; 2 ♂, May 1878; 3 ♂, April 1884; 2 ♂, March 1905.)

1 *Paradisca rubra*. Red Bird-of-Paradise.

(1 ♂, March 1881.)

1 *Ptilorhis paradisæa*. Australian Rifle-Bird.

(1 ♂, April 1882.)